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RubberWorld

The technical service magazine for the rubber industry

Volume 197, No. 1

Oct. 87

Polymer and carbon black die swell

Surface modified kaolins in EPDM

Predispersed rubber chemicals

Multifunctional rubber ingredients

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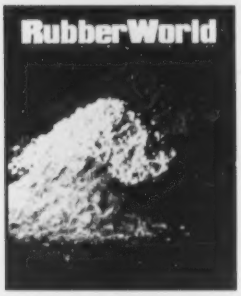

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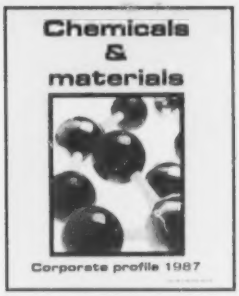

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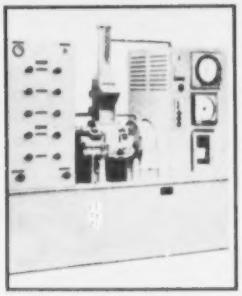

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Cover photo courtesy of Burton Rubber

A Lippincott & Peto Publication

Editorial

EPIC is celebrating its third birthday this month, and this youngster has quickly become one of the top assets of the rubber and polymer industries. EPIC or Edison Polymer Innovation Corporation, is not your typical corporation. The fact is, EPIC is a group of corporations, plus government and two universities. This triumvirate of business, government and academia cooperation, which has long been argued as a necessity for American industry, is working, and all the participants should be proud of the accomplishments to date. EPIC was incorporated to foster innovations through the efforts of member companies, The University of Akron and Case Western Reserve University in Cleveland and the State of Ohio. It originally funded 17 research projects, of which eight have come to fruition, and are ready to be transferred to those member companies interested in further development. Funds are derived from membership fees and grants from the state and used for research at the two universities. EPIC itself does not initiate research on its own, projects are determined through recommendations of an industrial advisory board. It has funded 34 projects to date, including the eight which are now ready to leave the laboratories of the universities. Among the eight are a polymeric wound dressing that incorporates a synthetic monomer agent which induces the growth of new tissue cells to accelerate the healing process, the development of a processibility tester prototype and a membrane viscometer.

Industry was obviously skeptical at the beginning but quickly identified the advantages of being a member. The original membership of 12 northeast Ohio based companies has grown to 53 companies with several multinational corporations. And for some, membership is not cheap. The annual fee for industrial members is determined by the dollar volume of their polymer-related sales. EPIC says some members pay up to $50,000 in annual fees.

This pooled research and development is working and is a smart business decision. Members not only benefit from early access to new technology, but also help determine research projects, recommend content of university sponsored seminars, short-courses and other programs, obtain assistance in the development of specialized training programs plus access to some of the most renowned polymer scientists and engineers at Akron University and CWRU. EPIC claims they are accelerating the innovative process, and it appears in a little under three years they are doing it successfully. And it also appears that industry, government and academia can pool their assets to the benefit of all three.

Don R. Smith

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RubberWorld

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Business Briefs

Roy A. Williams and Wayne R. Andrews, former General Electric materials testing engineers have opened an independent materials testing lab called **Materials Characterization Laboratory** in Schenectady, NY.

USG Industries signed an agreement to purchase **DAP**, Tipp City, OH a producer of caulks, sealants, adhesives and related products.

M.A. Hanna Co. formed a Dayton Polymers Group comprised of the Day International business units recently purchased by Hanna. The units include **Colonial Rubber Works** and **Cadillac Plastic and Chemical.** Hanna also will expand production capacity of its recently acquired **Allied Color Industries**, a producer of colorants and additives.

Arco Chemical Europe will construct a 420,000 metric tons/year methyl tertiary butyl ether unit at its Fossur-Mer plant near Marseille, France. Completion is expected by late 1988.

Spaulding Fibre Co., Tonawanda, NY will purchase all of the equipment and tools of **Synthane-Taylor Co.** that were used to develop and produce high pressure laminated sheet, tube and rod.

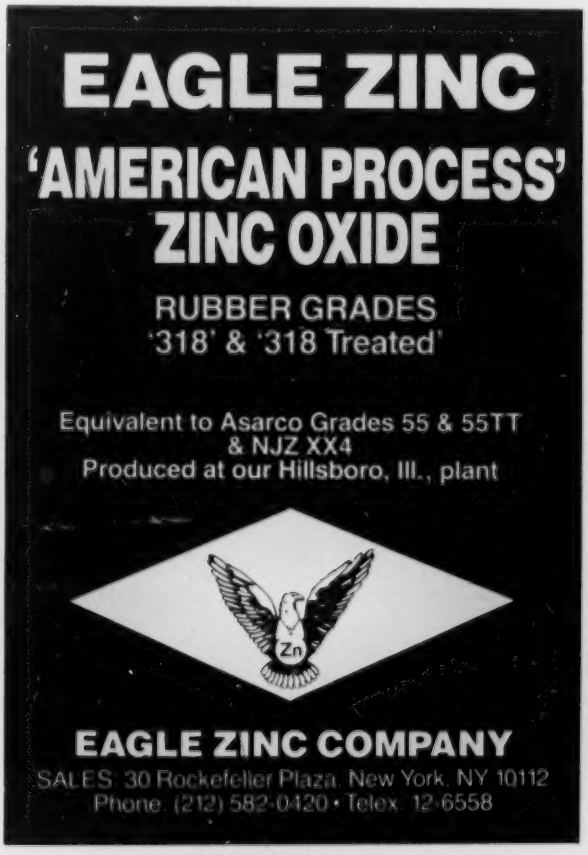
RMA rubber report through June (figures expressed in metric tons)

	YTD 1987	YTD 1986	% change
Total new rubber			
New rubber available	1,650,951	1,543,600	6.95
Imports	563,976	542,101	4.04
Exports	251,200	191,008	31.51
Apparent consumption	1,391,140	1,320,140	5.38
Total natural rubber			
Imports	419,518	405,802	3.38
Exports	17,884	19,839	-9.85
Apparent consumption	397,826	384,482	3.47
%total new rubber	28.59	29.12	
Total synthetic rubber			
Production	1,086,975	1,001,499	8.53
Imports	144,458	136,299	5.99
Exports	233,316	171,169	36.31
Apparent consumption	993,313	935,658	6.16
Total SBR			
Production	421,932	386,138	9.27
Imports	41,289	53,622	-23.00
Exports	89,439	48,669	83.77
Apparent consumption	379,506	380,552	-.27
Total nitrile			
Production	35,732	32,454	10.10
Imports	7,446	6,218	19.75
Exports	6,993	5,146	35.89
Apparent consumption	33,634	32,062	4.90
Polybutadiene			
Production	185,728	177,898	4.40
Imports	44,660	27,331	63.40
Exports	32,772	11,052	196.53
Apparent consumption	196,094	177,544	10.45
Ethylene-propylene			
Production	129,063	117,050	10.26
Imports	3,035	2,264	34.05
Exports	23,881	23,171	3.06
Apparent consumption	102,196	93,850	8.89
Butyl, polychloroprene, polyisoprene, silicone and other synthetic elastomers			
Production	314,519	287,960	9.22
Imports	48,028	46,864	2.48
Exports	80,231	83,131	-3.49
Apparent consumption	281,881	251,651	12.01

Contracts, licenses

Guyson Corp. appointed the **F.A. Ziegler Co.**, Homewood, IL as midwest region representative for its lines of Airless Blast Systems to rubber and plastics processors.

Truflex Rubber Products/Pang Rubber, Los Angeles, CA signed a joint venture with **Taurus Hungarian Rubber Tire Factory** for the manufacture of tire repair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materials which will be available for the Hungarian market as well as for export.

Financial statements

Cabot reported net income for the third quarter was $14.5 million on sales of $319.4 million.

GenCorp reported third quarter net income of $17 million on sales of $416 million.

Markets, news

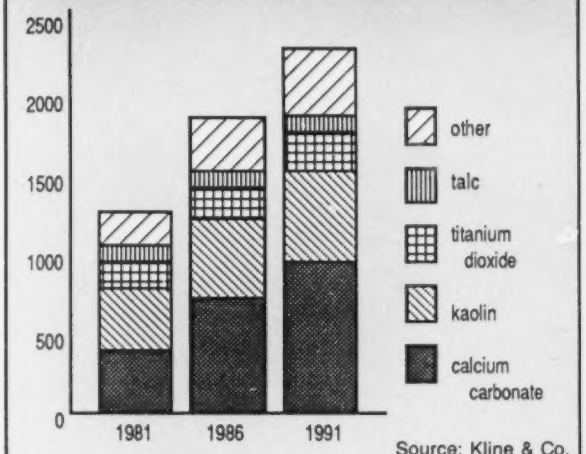
A recent study by Gabris International, Tolland, CT, predicts a 9.5% increase in sales of flexible hose in the U.S. and western Europe through 1991. Total sales were pegged at $2.6 billion dollars for 1986 which should increase to $2.89 billion by 1991. Automotive hose will remain the largest market segment with sales increasing from $940 million to $1 billion, a 6.4% increase followed by industrial hose with a 12.1% increase to $970 million. Usage of raw materials will increase in sales from $540 million to $600 million during the period. No change is expected for the demand of commodity rubber (NBR, neoprene, SBR, EPDM, natural and butyl) as materials of choice but thermoplastic rubber usage is expected to increase over 31% to almost 14,000 metric tons and specialty rubber demand should increase 12% to 30,819 metric tons by 1991. Thermoplastics, the largest material used is expected to increase 5.8% to over 125,000 metric tons.

The fastest growing segment of the U.S. tire industry over the next five years will be truck tire retreading according to research by Smithers Scientific Services, Akron, OH. Smithers says the movement towards all-steel radial truck tires will greatly improve the market for retreads because they can be retreaded several times while traditional bias truck tires are usually retreaded once per casing.

RMA tire report through June (figures in thousands of units)

Passenger tires	YTD '87	YTD '86	% change
Shipments			
original equipment	28,906	29,122	-0.74
radial	24,450	24,400	0.20
replacement	71,215	67,694	5.20
radial	63,362	57,995	9.25
export	2,714	1,859	45.99
radial	2,346	1,402	67.33
total	102,835	98,675	4.22
radial	90,158	83,797	7.59
Production	83,718	79,290	5.58
radial	72,884	66,828	9.06
Truck & bus tires			
Shipments			
original equipment	4,040	3,641	10.96
radial	2,818	2,417	16.59
replacement	16,306	14,933	9.19
radial	8,621	7,064	22.04
export	941	683	37.77
radial	662	420	57.62
total	21,287	19,257	10.54
radial	12,101	9,901	22.22
Production	17,696	15,636	13.17
radial	10,032	7,522	33.37

North American sales of extender and filler minerals in rubber and plastics



Source: Kline & Co.

Elastomer, plastic hose material demand

Material type	1986 demand (metric tons)	1991 forecast (metric tons)	Growth
Commodity rubber	102,442	103,142	NC
Specialty rubber	27,481	30,819	12.0%
Thermoplastic rubber	10,630	13,970	31.4%
Thermoplastics	118,300	125,160	5.8%
Total	258,853	273,091	5.5%

laboratory and consulting services for the rubber industry

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